

Letter from Alexander Graham Bell to Gardiner Greene Hubbard, March 14, 1878, with transcript

L. 1878 Telephone A.G.B. to G.G.H. Mch.14 Specifications 57 W.Cromwell Road, S.W. London,Eng.

In reference to the note of Mrs. Hubbard, enclosing copy of a letter received from Mr. Eustis Hubbard, requesting information concerning the patents for the telephone, I write a few facts that come to my remembrance.

In the autumn or winter of 1875, I visited Toronto and saw the Non. Hon. George Brown, and his brother, and arranged with them to take out my patents in England. Immediately upon my return to Boston I prepared either two or three specifications for Mr. Brown to take to England, I believe there were three, the first giving the method of transmitting musical signals by means of intermittant currents, the second the method of using induction coils, the third, the undulatory plan of the speaking telephone. This las last specification is substantially the same as that 2 subsequently filed in the American Patent Office, somewhere about the end of Feb. or beginning of Mch., 1876. These specifications were handed to Mr. Brown by me in New York. The date of my meeting Mr. Brown may be fixed by you, as you were with me when I called upon him and handed him the papers. These specifications are still in Mr. Brown's possession, unless he has destroyed them, and the one describing the undulatory current might be of very great importance in case of dispute as to priority of the speaking telephone.

Mr. Brown took the papers with him to England and I waited for work word from him before filing the application for the undulating method in the American Patent Office. After I had given my specification to the Hon. George Brown it was suggested by you that while waiting 3 for a cablagram from him it would be advisable for me to think very carefully over the whole subject of undulatory currents of electricity and see whether some other

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methods could not be devised than those I had claimed in my specification. I said "I felt there was a hole in the specification" and that there was some other method than those I had described for producing the undulatory current, and I occupied myself day and night on thinking over the subject.

I heard nothing from Mr. Brown and you wrote to me a number of times urging me to place my patent on the American Patent Office. Mr. Pollok also wrote to the same effect, and at last you wrote or telegraphed, I do not remember which, in the very strongest terms, urging to apply at one, me to apply at once, and I think you stated that 4 Specification making if after delaying so long I did not apply at once I deserved to lose the patent altogether, and you insinuated that it was not treating you or Mr. Sanders fairly to delay so long. When your urgent note or telegram reached me I felt that my last opportunity for amending the specification had come. While thinking over the matter the thought, matter the thought suddenly occurred to me that the undulating current would be produced by varying the resistance of the circuit and I told Mrs Miss . Hubbard, who was present, that I could now fill up the hole i in the specification.

I at once embodied the idea in the specification, but I felt that it was necessary to be more precise, and that some practical method of varying the resistance in such a manner as to produce undulatory currents should be pointed out. I therefore stated 5 that the external resistance of a battery could be varied by vibrating the elements of the battery so as to cause them mutually to approach and recede, or by vibrating the elements of the battery vertically in the liquid in which they were emersed. I stated further that the external resistance would be varied by vibrating the conducting wire in a liquid included in the circuit.

After adding these points I felt convinced that the undulatory current of electricity was completely covered and I forwarded the specification to Washington either the same night or next morning. I remember you wrote to say how much pleased Mr. Pollok was with the specification and shortly afterwards I met you and Mr. Pollok in New York for the purpose

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of going over the specification very carefully together, for you feared that it might not be complete 6 from a legal point of view, as I had written it entirely without the assistance of any one skilled in patent law.

We went over the whole specification together very critically and I recall the fact, which gratified me very much, that no change whatever as was made.

The patent was then filed and two hours afterwards Mr. Gray applied for a caveat for some method of transmitting sound that was included in my patent. An interference interference was at first declared but the Patent Office decided that a caveat presented the same day as a patent could not prevent the patent from issuing and Mr. Gray's caveat was thrown out and my patent retained.

These are the chief facts hearing upon the first patent for the speaking telephone. If I could have access to my correspondence preserved in a box in your house in Cambridge and to my box 7 in the Safe Deposit Co.'s vaults in Boston, I could find many letters and papers bearing hearing upon the subject.

P.S. Mr. Watson may perhaps be able to find out the date of our original experiment made with the form of telephone shown in the 1876 patent. I think it was earlier than August 9th, 1875. It was certainly made long before I removed to 5 Exeter Place. Mr. Watson may not only discover the date, but I think he could procure portions of the apparatus.

Ms Hubbard replies L Ms Bell's letter speaking of his idea of the undulating current under date data Aug 15